

NEVADA DIVISION OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS
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STREAM FISHERY MANAGEMENT

JOB NUMBER 206

JOB PROGRESS REPORT

State: Nevada
Project No.: F-20-29 Project Title: Statewide Fisheries Program
Job No.: 206 Job Title: Stream Fishery Management
Period Covered: January 1, 1993 through December 31, 1993

SUMMARY

Intensive surveys were conducted over 16.95 miles on three previously unsurveyed streams within the Rock Creek Drainage. While there is evidence that Lahontan cutthroat trout were caught by anglers (1940 circa) in Trout Creek, only native dace and suckers were found inhabiting the stream in June. Both Coyote Creek and Soldier Creek had only dace. A common denominator to all three streams is the undesirable riparian conditions, "poor" bank cover and stability ratings and minimal percent stream canopy readings.

Intensive surveys on the Forest portion of the East Fork Jarbidge River drainage encompassed 49.49 miles. Redband/rainbow trout were the dominant fish found in the drainage. Bull trout were only found at 8 of 37 (21.6%) fish population sites that had fish. Stream habitat conditions were stable as is indicative of Rosgen's A-2/A-1 type channels of which most sites were. Pool quality was the most limiting factor within the East Fork Jarbidge River and tributary streams.

Habitat and fish population surveys on Silver Creek (Snake Range) and North Creek (Schell Creek Range) in White Pine County were not completed in 1993 due to maintime constraints, but will be completed in 1994.

The mean HCI rating of the State owned reach of South Fork Humboldt River above the Lucky Nugget Causeway was 70.7 or "good". The riparian conditions were rated mostly "good" in the willow, grass, forb, rush, and sedge community.

Time was spent on four streams in the Schell Creek Range and three in the Snake Range. The streams reviewed were Berry Creek, Second Creek, Kalamazoo Creek and East Creek in the Schell Creek Range; and Big Negro Creek, Silver Creek and Willard Creek in the adjacent Snake Range.

Requests for fisheries review and comment were handled in a timely manner.

A population survey of Kalamazoo Creek was conducted to evaluate the impact of the recent drought on the wild trout fishery. A total of 48 brown trout were recovered from the 400 feet of stream sampled for a population estimate of 634 fish per mile, 1175 if expanded by recorded misses. The brown trout ranged in size from 67mm (2.6 inches) to 305mm (12.0 inches) fork length, with an average of 166mm (6.5 inches). Habitat conditions in the areas surveyed would have to be rated good overall. However, areas along upper Kalamazoo Creek not surveyed were found to be severely overgrazed, well beyond "standards and guides" for the USFS.

Opportunistic creel census data was collected on several White Pine County streams.

The ongoing and intensifying Bruneau River Cooperative Wildlife Habitat Management Project provided another opportunity to apply and evaluate the merits of The Riverine Riparian Classification System developed in cooperation with the Department of Wildlife in 1990. The U.S. Forest Service, Humboldt National Forest, and the Division of Wildlife are currently embroiled in the development of an Environmental Assessment for the Bruneau River Project. The classification project was completed late in 1993 and the results are currently being analyzed and incorporated into the document. The decision notice is expected to be released early in 1994.

INTERAGENCY STREAM SURVEY PROJECT

OBJECTIVE

To conduct intensive habitat and fish population surveys on about 65 miles of stream within the East Fork Jarbidge River Drainage, Elko County.

PROCEDURES

The USFS-NDOW Cooperative Stream Survey and Inventory Team in NDOW's administrative Region II consisted of the principle investigator serving as crew leader and three temporary personnel. The field season extended from June 7 through October, 1993. One summer temporary only worked through August due to his having to return to college. Stream survey and inventories consumed 13 weeks of field work. Above average snowpack in 1993 prevented survey work in the East Fork Jarbidge River from beginning in June as planned. Hence, an alternate survey area at lower elevations was chose for work in the Rock Creek Drainage of the Humboldt River Basin. Work in the East Fork Jarbidge River Drainage began the second week of July after streamflow in a first order stream had subsided from a measured 17 cfs on June 29 to 7.6 cfs on July 14.

Stream survey methodology followed procedures outlined for the GAWS Level III survey in the USFS-Region 4 Habitat Surveys Handbook. On locating a sample station from the preplotted, USGS 7.5 minute topographic map, the crew would conduct a one-pass fish capture effort with a Dirigo 700 backpack electroshocker over a distance of 100 feet. A fish blocknet was placed at the downstream end of each electrofished section. Captured fish were placed in a bucket, identified, measured (fork length), weighed and returned to the stream. Game fish were examined for relative body condition. Fish seen escaping the electric field or otherwise lost during capture or processing were recorded. Relative quantitative and qualitative information on aquatic invertebrates were assessed at each survey site via substrate particle and stream observation. Habitat transects began 100 feet upstream of the beginning of each station.

Stream measurements to determine discharge were taken over a uniform length of flowing water where, such an area could be found at a station. Stream velocity was determined by the average of several floating object time trials. Air and water temperature were taken at each station using a pocket mercury thermometer.

Fish population data was summarized for each stream. GAWS habitat data was entered and analyzed on IBM compatible PC and backed-up on floppy disc. A report will be prepared for each surveyed stream. Computer data, reports and slides will be provided to the Humboldt National Forest upon completion.

FINDINGS AND ANALYSIS

Intensive surveys were conducted over 16.95 miles on three previously unsurveyed streams within the Rock Creek Drainage. (Appendix 1). While there is evidence that Lahontan cutthroat trout were caught by anglers (1940 circa) in Trout Creek, only native dace and suckers were found inhabiting the stream in June. Both Coyote Creek and Soldier Creek had only dace. A common denominator to all three streams is the undesirable riparian conditions, "poor" bank cover and stability ratings and minimal percent stream canopy readings. These factors alone would prevent year-round trout residency. Streambank damage caused by ungulates was rated as "moderate" over the three streams.

Intensive surveys on the Forest portion of the East Fork Jarbidge River drainage encompassed 49.49 miles. Redband/rainbow trout were the dominant fish found in the drainage. Bull trout were only found at 8 of 37 (21.6%) fish population sites that had fish. Bull trout occupied only the two highest elevation sites on the East Fork Jarbidge River and Dave Creek. The lowest elevation site on two unnamed tributary streams of Slide Creek held subcatchable bull trout while, only one bull trout was collected in the main stem of Slide Creek. An ocular of two adult trout at Station 1 in Fall Creek was included as a possible bull trout sighting although, only redband\rainbow trout were collected elsewhere in the drainage.

Stream habitat conditions were stable as is indicative of Rosgen's A-2/A-1 type channels of which most sites were. Pool quality was the most limiting factor within the East Fork Jarbidge River and tributary streams.

RECOMMENDATION

The Region II stream survey effort should conduct surveys within the Jarbidge River drainage (below the Forest Boundary) and East Fork Bruneau River drainage (Elk Mountain). Surveys within these areas are needed to delimit bull trout distribution in Nevada.

APPENDIX I

SUMMARY OF THE 1992 USFS-NDOW COOPERATIVE STREAM SURVEY
AND INVENTORY, NDOW REGION II (ELKO COUNTY)

DRAINAGE, STREAM	SURVEY MILES	HAB STA	HCI	PERCENT UNGULATE USE	DISCHARGE RANGE(CFS)	FISH POP STATIONS PRESENT	FISH POP SPECIES,	TROUT OCCUPIED PERCENT /MILE MILES EMBEDDEDNESS
EFJR	Cougar Ck	3.90	5	63.4	0.0	1.13-1.59	5 Rb	158
RCD1	Coyote Ck	4.05	6	56.5	36.2	0.04-0.53	6 Da	38
EFJR	Dave Ck	2.75	4	53.3	7.3	2.54-12.18	4*** Rb/Bt	211
	Tributary	2.05	1	60.8	2.5	0.53	1 None	28
JRD-ID	E.F.Jarbridge	R.13.50	13	73.3	4.2	1.20-10.17	13 RbBtScDa	317
EFJR	Fall Ck	3.75	5	59.3	0.0	2.44-14.66	5 Rb/Bt	145
	Tributary A	1.79	2	64.4	0.0	4.20-5.69	2 Rb	53
	Tributary B	1.70	3	51.8	0.0	2.08-3.67	2 Rb	53
SCD	Gods Pocket Ck	3.57	5	60.4	0.0	0.85-2.86	5 Rb	106
RCD2	Jim Bob Ck	2.30	3	68.3	6.0	0.53-0.69	3 Rb	211
EFJR	Robinson Ck	6.17	8	62.0	21.9	0.57-2.90	8 Rb	475
EFJR	Slide Ck	5.40	7	63.0	2.1	0.85-6.71	7 Rb/Bt/Sc	185
	Tributary A	1.46	3	63.5	0.0	0.88-1.91	3 Bt	370
	Tributary B	1.15	2	55.9	0.0	0.11-0.14	2 Rb/Bt	53
CCD	Soldier Ck	4.70	5	61.6	44.0	0.18-0.42	5 Da	35
HRD	S.F.Humboldt	R.2.40	4	70.7	4.3	12.18-12.43	0 No Data	56
RCD1	Trout Ck	6.10	7	57.8	37.3	0.07-1.77	7 Da/Su	32
	Upper Tributary	2.10	3	48.7	38.3	0.11-0.99	3 None	27
TOTALS		68.84	86				81	30.3

1. Drainage Abbreviations:

CCD-Doyote Creek
 EFJR-D-East Fork Jarbridge River
 HRD-Humboldt River
 JRD-ID-Jarbridge River-Idaho
 RCD1-Rock Creek
 RCD2-Robinson Creek
 SCD-Slide Creek

2. Species Abbreviations:

Bt-Bull trout
 Rb-Redband/Rainbow Trout
 Sc-Sculpin
 SU-Sucker
 Da-Dace

***Dave Ck fish populations were
 resurveyed under lower stream
 flows (2.03-3.93 cfs).